I. Listing of Claims

1. (Currently Amended) A method of maximizing a usage of memory wherein said memory includes a nonvolatile memory and a volatile memory in communication with a digital signal processor (DSP) comprising the steps of:

transferring a jump and lookup table from said nonvolatile memory to said volatile memory, said jump and lookup table providing a sequence of addresses to execute an equalization structure of said DSP;

transferring a plurality of filter coefficients from said nonvolatile memory to said volatile memory, said plurality of filter coefficients provide filter characteristics for said equalization structures;

applying a set of filter coefficients to said equalization structure;

filtering said input signal utilizing said equalization structure and producing an intermediate result wherein said intermediate result is stored for additional filtering;

determining if the intermediate result requires additional filter and then selecting one of outputting said intermediate result as an equalized output signal ~~when said sequence of addresses in said jump and lookup table indicates~~ if additional filtering is [[complete]] not required and filtering said intermediate result if additional filtering is required.

2. (Original) A method of equalizing an input signal for a digital signal processor (DSP) which produces an output signal having a desired frequency response, comprising the steps of:

transferring a jump and lookup table from nonvolatile memory to volatile memory, said jump and lookup table containing addresses to execute equalization structures of the DSP;

transferring a plurality of filter coefficients from said nonvolatile memory to said volatile memory, said plurality of filter coefficients provide optimum equalization structures to obtain said desired frequency response;

retrieving one of said addresses by use of a first pointer to execute a first equalization structure;

retrieving a corresponding set of filter coefficients by use of a second pointer to provide a first equalization structure;

producing an intermediate result in response to filtering said input signal;

incrementing said first pointer to next said addresses of said jump and lookup table to execute a subsequent equalization structure;

incrementing said second pointer to next said corresponding set of filter coefficients to provide a subsequent equalization structure;

transferring said intermediate signal to said subsequent equalization structure for additional filtering,

incrementing said first pointer and said second pointer to provide next said subsequent equalization structure for additional filtering;

transferring said intermediate result as an equalized output signal when said first pointer indicates filtering is complete.

3. (Original) The method of claim 2 wherein said frequency response includes a set of separate frequency bands.

4. (Original) The method of claim 2 wherein said equalization structure uses a plurality of equalization structures.

5. (Currently Amended) The method of claim 4 wherein a first equalization structure has a first [[filter]] equalization characteristic and a second filter structure has a second filter characteristic.

6. (Original) The method of claim 2 wherein said equalization structure uses one equalization structure repeatedly.

7. (Original) The method of claim 2 wherein said input data signal is an audio signal and said jump and lookup table and said sets of filter coefficients are adapted to provide predetermined equalization according to a plurality of frequency bands customized to acoustical characteristics of a predetermined automobile interior.

Claims 8 – 20. (Cancelled)

21. (New) A processing module comprising:

a memory unit containing filtering data for producing a desired frequency response;

a digital signal processor (DSP) having DSP memory unit, an input for receiving an unfiltered signal and an output for outputting a filtered signal;

a controller coupled to a memory unit and the DSP, the controller configured to transferring the filtering data from the memory unit to the DSP memory unit; and

the DSP being configured to produce an intermediate result by using the filtering data to filter the unfiltered signal, determine if the intermediate result requires additional filtering and performing one of outputting the intermediate result if additional filtering is not required and filtering said intermediate results if additional filtering is required.

22. (New) The module of Claim 1, wherein the memory unit is nonvolatile memory unit.

23. (New) The module of Claim 2, wherein the nonvolatile memory unit is an EEPROM.

24. (New) The module of Claim 21, wherein the DSP memory unit is a volatile memory unit.

25. (New) The module of Claim 24, wherein the volatile memory unit is a RAM.

26. (New) The module of Claim 21, further comprising a second memory unit configured to restore the intermediate result.

27. (New) The module of Claim 21, wherein the filtering data comprises the filtering coefficients, a jump table and a lookup table.